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Short report

Use of HIV PEPSE and Hepatitis B vaccine following the introduction of a SARC

Judy Bennett BSc, MBBS, MRCGP, DRCOG, DFFP Sexual Offence Examiner *, Sandie Johnson RN, BSc (Hons) PGDip Manager Gloucester SARC

Gloucester Sexual Assault Referral Centre, Gloucestershire Royal Hospital, Great Western Road, Gloucester, Gloucestershire, GL1 3NN, UK

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ABSTRACT

Adherence to local guidelines on the use of HIV post exposure prophylaxis (PEP) and hepatitis B vaccine following sexual assault was evaluated by means of audit. Forensic Medical Examiners (FMEs) were asked to complete an audit form after conducting sexual offence examinations at Gloucester Sexual Assault Referral Centre (SARC).

Only one HIV PEP pack was prescribed during the six and a half month audit period. Examination of the SARC records of the allegations made by complainants did not reveal any high-risk cases involving a failure to offer HIV post-exposure prophylaxis following sexual exposure (PEPSE).

The majority of the examinations performed at the SARC were carried out by trained sexual offence examiners (SOEs). The audit indicates that these SOEs were considering the appropriate use of HIV PEPSE and hepatitis B vaccine when they performed examinations. Some examinations were performed by general forensic medical examiners who completed the audit forms infrequently. It was not possible to determine whether these examiners were considering the appropriate use of HIV PEPSE and hepatitis treatments.

1. Introduction

Post exposure prophylaxis (PEP) following sexual exposure to HIV is known as HIV PEPSE and in 2006 the British Association for Sexual Health and HIV (BASHH) published guidelines for the use of HIV PEPSE which are available on the BASHH website.[1] These guidelines have been adapted for use in Gloucestershire by the local GU and HIV consultants and this advice is available to forensic medical examiners (FMEs) attending cases at Gloucester SARC which is located within the sexual health building on the hospital site. A chart used in Gloucestershire as an initial risk assessment for HIV PEPSE is shown in Table 1. More detailed written advice is available at the SARC and telephone advice can be obtained from the local GU and HIV consultants who are available on call. Three-day HIV PEP starter packs are available in the forensic examination room. SARC patients are offered follow up appointments with SARC staff who facilitate screening in the adjacent GU clinic.

The BASHH guidelines on the management of sexual assault[2,3] recommend offering Hepatitis B vaccine following sexual assault and this is also available at Gloucester SARC. In rare instances, when an assailant is strongly suspected of being a carrier of Hepatitis B, immunoglobulin should be offered to a complainant who presents within seven days. In most cases of rape it is appropriate to offer Hepatitis B vaccine unless the patient is already immune or has a contraindication to the vaccine. The Gloucestershire GU consultants advise immunisation at 0, 7 and 21 days post assault and Engerix B vaccine is available at Gloucester SARC. The first dose can be given at the time of the forensic examination with follow up doses from the GU clinic or patient's GP.

Each complainant is assigned a SARC client number when they first attend the SARC. This number is used on an attendance record completed by crisis workers at the time of a forensic examination. A copy of the SARC attendance record is shown in Table 2. The client number is also used on the drug chart completed by sexual offence examiners who are able to prescribe HIV PEP packs, hepatitis B vaccine, emergency contraception, prophylactic antibiotics and other medication. The SARC staff copy the drug chart for the SARC records and the original copy is used by GU doctors who follow up the complainants in the adjacent GU clinic.

When complainants return to attend the GU clinic for medical follow up they normally enter the clinic via an internal access door from the SARC to the GU clinic which obviates waiting in the open access GU clinic. SARC staff provide a brief written summary of the allegations to the GU staff so that the patient does not have to describe the details of the incident again if they find this distressing.

* Corresponding author. Tel.: +44 1452 754390.
E-mail address: judybennett@doctors.org.uk (J. Bennett).

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Table 1
Gloucester sarc risk assessment for HIV pepse (2009).

Type of Exposure	HIV positive	HIV status unknown but high-risk group >10%	HIV status unknown but not from high risk area
Receptive anal sex	**Recommended**	**Recommended**	*Consider*
Receptive vaginal sex	**Recommended**	*Consider*	Not Recommended
Fellatio with ejaculation	Consider	*Consider*	Not Recommended
Splash of semen into eye	*Consider*	*Consider*	Not Recommended
Fellatio without ejaculation	Not Recommended	Not Recommended	Not Recommended
Cunnilingus	Not Recommended	Not Recommended	Not Recommended

2. Methods

The medical notes recorded by forensic medical examiners (FMEs) at the time of forensic examination are initially stored in a safe at Gloucester SARC from where they are collected for storage outside the county. This made it difficult to review notes for audit purposes. It was therefore necessary to ask FMEs to complete an audit form after they had conducted sexual offence examinations. Complainants under the age of sixteen were not included in the study. A copy of the audit form is shown in Table 3.

SARC records made it possible to look at the allegations made by complainants of sexual assault to assess whether forensic medical examiners had missed any cases where local guidelines would have recommended the use of HIV PEPSE.

The SARC records also enabled the identification of cases where forensic examination was carried out but no audit form was completed.

3. Results

3.1. Results for first time period

The results were looked at for two time periods. The first time period was between 27th December 2009 and 31st March 2010. The SARC records show 17 forensic examinations and 16 completed audit forms were collected which is a response rate of 94%.

There was one complainant during the first time period for whom no audit form was found. The SARC records show that the case involved a female complainant who collapsed at the SARC and was transferred to the Emergency Department before a forensic examination was performed. The allegation in this case involved vaginal rape by an acquaintance.

During the first time period 15 out of 16 examinations were carried out by trained SOEs. Only the collapsed patient was not assessed for HIV PEPSE.

There was one case where HIV PEPSE was considered. We do not know whether consent to use of the medical notes for more detailed medical audit was given and therefore do not provide more information about this case.

Two patients were not considered for hepatitis B vaccine one of whom was the collapsed patient. It was not clear why the second patient was not offered the vaccine.

3.2. Results for second time period

The results were looked at for a second time period between the 1st April and 15th July 2010. According to the SARC records there were 25 adult forensic examinations during this period but only 15 completed audit forms were collected which is a response rate of 60%.

Of the 10 examinations without completed audit forms 6 involved general forensic medical examiners, one a new sexual offence examiner (SOE) from another county and 3 locally trained SOEs.

An assessment of the cases with no audit form was completed using the SARC records to ascertain whether there had been any 'high-risk' cases where failure to offer HIV PEPSE or Hepatitis B immunoglobulin was contrary to local guidance. This review did not reveal any cases where local guidelines would have clearly recommended the use of HIV PEPSE and there was a failure to offer this treatment. We found no cases involving male on male anal rape. There was one case of anal rape in a female with learning difficulties by her ex-partner who also had learning difficulties. There was one case where anal soreness was noted in a female who did not know what had happened to her and the alleged assailant was a white British male. There were no cases involving multiple perpetrators. There was one stranger incident of vaginal rape where the country of origin of the perpetrator was not recorded.

One PEP pack was prescribed to a complainant who had self referred and consented to her medical notes being used for medical audit. The allegation was of vaginal rape without a condom and the perpetrator was thought to be from a country in Asia. It was not clear whether ejaculation had occurred. Digital penetration of the anus was also alleged. The complainant was reported to be very anxious. The sexual offence examiner spoke with the on call GU consultant who said that he thought that the risk of contracting HIV was not high. The HIV PEP starter pack was prescribed. The patient subsequently returned to the GU clinic and took the full 28 course of HIV prophylaxis. She was HIV negative six months after the incident. This patient had her first dose of hepatitis B immunisation at the SARC with further doses in the GU clinic.

HIV PEPSE was considered for two other complainants during this time period. The first complainant was a self-referral and SARC records show that she did not want her medical notes to be used for audit. We do not know whether the second complainant consented to her notes being used for medical audit.

During the second time period there were no audited cases where Hepatitis B vaccine was not considered.

3.3. Overall results

The results are shown in Tables 4 and 5.

42 adult patients attended Gloucester SARC for forensic examination during the audit period and audit forms were received for 31 patients. This is a response rate of 74%.

The audit did not reveal any instances in which local guidance would have recommended HIV PEPSE and there was a failure to offer this treatment.

Four patients were considered for HIV PEPSE and this treatment was discussed with all of them. One patient was prescribed an HIV PEP pack.

Eight out of the 19 (42%) patients offered the Hepatitis B vaccine accepted it at the time of forensic examination.

Audit forms were completed on 28 of the 32 occasions when the forensic examination was conducted by a trained SOE. One of

Table 2

hope house
SEXUAL ASSAULT
REFERRAL CENTRE

SARC Ref No: ..... Inc No ..... of / /

Name .....

SARC Attendance Record & Follow-up

Date of attendance at SARC .....

D o B: ..... Age: .....

Address: .....

Tel contact : Landline ..... Mobile .....

Other .....

STO Name ..... Crisis Worker Name.....

SOE Name ..... Did examination take place? Yes / No
Were swabs taken? Yes / No

GP Name & Address: .....
Can GP letter be sent? Yes / No

Given information pack? Yes / No If no, why not? .....

Follow Up Arrangements

Would like contact from SARC? Yes / No If yes, how? By phone / by letter?
If no, reason? .....

GUM Appt? Hope House / Benhall / GP / NA

Counselling? SARC / Rape Crisis / Other Details: .....

Any issues of concern?

Known Offender Details (name, age, charged)

Home Office Form completed? Yes / No

SARC Attendance Details

SARC Ref No: .....

Date & time of assault .....

Number of assailants ..... Type of assault .....

Medication given? Yes / No
(Please put medication chart in Blue SARC Folder)

the occasions when no audit form was received involved the patient who was urgently transferred to the emergency department.

Audit forms were completed on 3 of the 10 occasions when the forensic examination was carried out by a general FME.

4. Discussion

The audit supports the fact that locally recruited and trained SOEs were considering the appropriate use of HIV PEPSE and Hepatitis B vaccine when they performed sexual offence examinations. The audit did not reveal any instances in which local guidance would have recommended HIV PEPSE and there was a failure to offer this treatment, which is reassuring. There was one incident of vaginal rape by a stranger where the likely country of origin of the perpetrator was not recorded which is a concern.

Only one HIV PEP pack was prescribed during the during the six and a half months of the audit which was approximately what would be expected in an area with a relatively low prevalence of HIV and around 100 sexual offence examinations per year.

There is less urgency in administering Hepatitis B vaccine than HIV PEPSE. Some patients had already been immunised against hepatitis B before they attended the SARC. The offer and acceptance of Hepatitis B vaccine at the time of forensic examination may increase the likelihood of patients returning for sexual health screening.

Where no audit form was completed we do not know whether the examiner considered the use of HIV PEPSE and hepatitis vaccine. There were 11 instances where no audit form was completed one of which involved a patient who collapsed before a forensic examination was performed and it was appropriate to transfer this patient to the emergency department as occurred. Of

Table 3
Audit of the appropriate use of HIV PEPSE and Hepatitis B vaccine at Gloucester SARC following allegations of rape or serious sexual assault.

Audit of the Appropriate Use of HIV PEPSE and Hepatitis B vaccine at Gloucester SARC following Allegations of Rape or Serious Sexual Assault

Patient's SARC Number:

1. Local Guidelines say that HIV PEPSE is:

a) Recommended O

b) Considered O

c) Not Recommended O

2. HIV PEPSE has been:

a) Prescribed O

b) Discussed but not prescribed O

c) Not discussed or prescribed. O

3. Hepatitis B Vaccine has been:

a) Offered and accepted O

b) Offered and declined O

c) Not offered because not appropriate O Patient has been immunised previously or is known to be immune or infected or to have a contraindication to vaccine.

d) Not offered although appropriate. O

Name of FME (optional)

the 10 remaining cases where no audit form was completed six were performed by FMEs who may have had little specific sexual offence examination training and one by a new sexual examiner from another county who was not familiar with Gloucestershire procedures. The failure to complete an audit form may reflect a lack of training and induction to the SARC. We would recommend that training on prophylaxis and aftercare are included in any contract with providers. Doctors seeing cases at the SARC should receive an induction to the facility and be aware of local guidelines and how to implement them.

The Gloucestershire guidelines on HIV PEPSE have been updated since the audit was conducted and Gloucestershire SOEs have been made aware of the changed guidance. All the examiners attending the SARC should be made aware when guidelines are updated.

At the start of the first audit period most examiners were using the 2005 version of the FFLM examination pro forma that provided limited prompting about medical aftercare. During the second time period the new FFLM pro forma was used for most examinations.[4] The new pro forma prompts examiners to think about HIV PEPSE and Hepatitis B vaccine which is beneficial. The pages on medical aftercare and consent can be photocopied to assist SARC staff with medical aftercare and future audits. This change has now been adopted at Gloucester SARC.

Table 4
Guidelines advice for HIV PEPSE and action taken.

HIV PEPSE	**Recommended**	*Consider*	Not recommended
Prescribed	0	1	0
Discussed but not prescribed	0	3	18
Not prescribed or discussed	0	0	9

Table 5
Hepatitis B vaccination.

Hepatitis B vaccination	
a) Offered and accepted	8
b) Offered and declined	11
c) Not offered because not appropriate	11
d) Not offered although appropriate	1

This audit was conducted in a new sexual assault referral centre in the small city of Gloucester in England. The SARC serves the city and surrounding area and most complainants live in the county of Gloucestershire. Patients can self refer to the SARC but most of the complainants who have forensic examinations have initially reported to the police. The number of cases seen at the SARC is small and it is interesting to compare our findings with those from elsewhere.

Limb et al conducted a retrospective case note review of patients attending a sexual assault service in London in 1999.[5] One hundred and fifty patients attended the service during the twelve months of the study. The patients were assessed for HIV PEP and ten were considered eligible for treatment. Eight patients accepted prophylaxis of whom five completed the full twenty-eight day course. All of the patients who took PEP were HIV negative at six months.

In 2003 Wulfsohn presented the findings of a South African study at the National HIV Prevention Conference in Atlanta, Georgia, USA.[6] This study was a retrospective review of medical notes of patients seen over a four year period at a private health care facility in Johannesburg where the adult HIV seroprevalence was between 20 and 30%. 687 patients were reviewed of whom 16% were HIV positive at presentation. 435 HIV negative patients received a three day course of PEP within 72 h of the assault. It is not known how many returned for the subsequent 25 day prescription of PEP. 173 patients returned and accepted testing six or more weeks after the assault when a single patient was found to be HIV positive.

In the South African study twenty five patients presented more than 72 h after the assault and were therefore not eligible for PEP. Nine of these patients returned for follow up testing and one HIV seroconversion occurred. A sixteen year old woman, who was HIV negative at the time of presentation, but presented twelve days after the assault and was therefore not prescribed HIV PEP subsequently seroconverted. She had no risk factors for acquiring HIV other than the assault implying transmission of HIV via the sexual assault.

A Canadian study found that strong support for HIV PEP from health care workers was the most important influencing factor in adolescents' acceptance of treatment following sexual assault.[7]

HIV PEP following sexual assault is a developing area with which sexual offence examiners should keep up to date in order that patients are protected against HIV. HIV PEP is also important for medico-legal reasons as failure to document adequate risk assessment and the offer of PEP would be viewed as negligent.

The British Association for Sexual Health and HIV (BASHH) is currently updating its guideline for the use of post-exposure prophylaxis for HIV following sexual exposure and the draft guideline is now available on the BASHH website.[8] British sexual offence examiners will need to implement the 2011 guideline in the specific locality in which they work.

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